

REPORT ON MACHINERY.

BOX CASE (5559)

No. 5558

No. in Survey held at Boston

Date, first Survey 1st Aug. 84 Last Survey August 1884

Received at London Office 15 1884

on the iron steam ship Lizzie & Annie

(Number of Visits 2) Tons 99 62

Master Built at Nath Shields By whom built Soffley & Co. When built 1878

Engines made at Boston By whom made Patterson & Atkinson Newcastle when made

Milers made at Boston By whom made Quapin & Co. when made 1884

Registered Horse Power 25 Owners J. Slater (Boston & Harlow S. S. Co.) Port belonging to Boston

GINES, &c.—

Description of Engines Vertical inverted Cylinders Simple expansion & surface condenser

Diameter of Cylinders 21 1/4" Length of Stroke 16" No. of Rev. per minute _____ Point of Cut off, High Pressure _____ Low Pressure _____

Diameter of Screw shaft 3 1/2" Diam. of Tunnel shaft 3 7/8" Diam. of Crank shaft journals 3 7/8" Diam. of Crank pin 3 1/8" size of Crank webs 5 1/2" x 2 1/2"

Diameter of screw _____ Pitch of screw _____ No. of blades 3 state whether moveable no total surface _____

No. of Feed pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

No. of Bilge pumps _____ diameter of ditto _____ Stroke _____ Can one be overhauled while the other is at work _____

Where do they pump from _____

No. of Donkey Engines _____ Size of Pumps _____ Where do they pump from _____

Are all the bilge suction pipes fitted with roses _____ Are the roses always accessible _____ Are the sluices on Engine room bulkheads always accessible _____

Are all bilge injections _____ and sizes _____ Are they connected to condenser, or to circulating pump _____

Are the pumps worked _____

Are all connections with the sea direct on the skin of the ship _____ Are they Valves or Cocks _____

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates _____ Are the discharge pipes above or below the deep water line _____

Are they each fitted with a discharge valve always accessible on the plating of the vessel _____ Are the blow off cocks fitted with a spigot and brass covering plate _____

How are the pipes carried through the bunkers _____ How are they protected _____

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times _____

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges _____

Were stern tube, propeller, screw shaft, and all connections examined in dry dock _____

Is the screw shaft tunnel watertight _____ and fitted with a sluice door _____ worked from _____

BOILERS, &c.—

No. of Boilers One Description Circular multitubular Whether Steel or Iron iron

Working Pressure 55 lb Tested by hydraulic pressure to 130 lb Date of test 1st August 1884

Description of superheating apparatus or steam chest Vertical Cylinder open bottomed with vertical stays

Can each boiler be worked separately X Can the superheater be shut off and the boiler worked separately X

Area of fire grate surface in each boiler 16 0 Description of safety valves dead load No. to each boiler Two

Area of each valve 4 sq. in Are they fitted with casing gear yes No. of safety valves to superheater _____ area of each valve _____

Are they fitted with casing gear _____ Smallest distance between boilers and bunkers or woodwork 5' Diameter of boilers 7' 6"

Height of boilers 7' 6" description of riveting of shell long. seams double rivet lap circum. seams single rivet lap Thickness of shell plates 1/2"

Number of rivet holes 12/16 whether punched or drilled punched pitch of rivets 3/4" Lap of plating 4"

Age of strength of longitudinal joint 64 working pressure of shell by rules 55 lb size of manholes in shell 17" x 13"

Are there compensating rings 3' x 1/2" No. of Furnaces in each boiler 2

Diameter 31" length, top 5' 3" bottom 7' 0" thickness of plates 7/16" description of joint single rivet lap if rings are fitted no

Length between stays 6' 0" working pressure of furnace by the rules 90 lb combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Are stays to ditto, sides 6' x 6" back 6' x 6" top rounded if stays are fitted with nuts or riveted heads riveted heads working pressure of plating by

175 lb Diameter of stays at smallest part 1 1/16" working pressure of ditto by rules 180 lb end plates in steam space, thickness 1/2"

Are stays to ditto 10 between rivets how stays are secured riveted to angles working pressure by rules 55 lb diameter of stays at

test part X (quantity plates) working pressure by rules 55 lb Front plates at bottom, thickness 1/2" Back plates, thickness 1/2"

pitch of stays 6" working pressure by rules > 100 lb Diameter of tubes 3" pitch of tubes 5' x 4 1/4" thickness of tube

Are stays, front 3/4" back 3/4" how stayed stay tubes pitch of stays 15" width of water spaces 1 1/4"

No. of Superheater or Steam chest 27 length _____ thickness of plates 7/16" description of longitudinal joint single rivet lap diam. of rivet holes 3/4" + 3/16"

Are rivets 2" working pressure of shell by rules 120 lb diameter of flue _____ thickness of plates _____ If stiffened with rings _____

Are there between rings _____ working pressure by rules _____ end plates of superheater, or steam chest; thickness 7/16" how stayed 4 1/4" stays

Superheater or steam chest; how connected to boiler single riveted to shell

of "Lizzie & Annie"

